

List of Claims:

Claims 1-29 (cancelled)

Claim 30 (new): A method for use by a first gateway to establish data communication between a first modem and a second modem over a packet network, said method comprising:

- receiving a call from said first modem over a first telephone line;
- negotiating, in response to said call, over said first telephone line with said first modem to establish a first physical link connection;
- informing a second gateway of said call over said packet network;
- establishing a gateway-to-gateway transport link with said second gateway over said packet network;
- determining a set of data link parameters supported by said first modem, said first gateway, said second gateway and said second modem;
- establishing a first data link protocol over said first physical link connection using said set of data link parameters;
- wherein data is communicated between said first modem and said second modem over an end-to-end reliable connection between said first modem at one end and said second modem at the other end, wherein said end-to-end reliable connection uses said set of data link parameters.

Claim 31 (new): The method of claim 30, wherein said second gateway informs said second modem of said call over a second telephone line, and wherein said second gateway negotiates with said second modem over said second telephone line to establish a second physical link connection.

Claim 32 (new): The method of claim 31, wherein, during said determining, said second gateway establishes said second data link protocol over said second physical link connection using said set of data link parameters.

Claim 33 (new): The method of claim 30, wherein said gateway-to-gateway transport link is an unreliable transport link.

Claim 34 (new): The method of claim 30, wherein said determining said set of data link parameters includes initiating said first data link protocol and stalling said first data link protocol.

Claim 35 (new): The method of claim 34, wherein said first data link protocol is based on ITU V.42 standard.

Claim 36 (new): The method of claim 35, wherein said stalling includes transmitting an RNR by said first gateway to said first modem.

Claim 37 (new): The method of claim 36, wherein said determining said set of data link parameters further includes resuming said first data link protocol by transmitting an RR to said first modem.

Claim 38 (new): A first gateway device capable of establishing data communication between a first modem and a second modem over a packet network, said first gateway device comprising:

- a receiver configured to receive a call from said first modem over a first telephone line;
- a controller configured to negotiate, in response to said call, over said first telephone line with said first modem to establish a first physical link connection, wherein said controller is further configured to inform a second gateway of said call over said packet network and establish a gateway-to-gateway transport link with said second gateway over said packet network;

wherein said controller is further configured to determine a set of data link parameters supported by said first modem, said first gateway, said second gateway and said second modem, and establish a first data link protocol over said first physical link connection using said set of data link parameters;

wherein data is communicated between said first modem and said second modem over an end-to-end reliable connection between said first modem at one end and said second modem at the other end, wherein said end-to-end reliable connection uses said set of data link parameters.

Claim 39 (new): The first gateway device of claim 38, wherein said second gateway informs said second modem of said call over a second telephone line, and wherein said second gateway negotiates with said second modem over said second telephone line to establish a second physical link connection.

Claim 40 (new): The first gateway device of claim 39, wherein said controller determines said set of data link parameters while said second gateway establishes said second data link protocol over said second physical link connection using said set of data link parameters.

Claim 41 (new): The first gateway device of claim 38, wherein said gateway-to-gateway transport link is an unreliable transport link.

Claim 42 (new): The first gateway device of claim 38, wherein said determining said set of data link parameters includes initiating said first data link protocol and stalling said first data link protocol.

Claim 43 (new): The first gateway device of claim 42, wherein said first data link protocol is based on ITU V.42 standard.

Claim 44 (new): The first gateway device of claim 43, wherein said stalling includes transmitting an RNR by said first gateway to said first modem.

Claim 45 (new): The first gateway device of claim 44, wherein said determining said set of data link parameters further includes resuming said first data link protocol by transmitting an RR to said first modem.

Claim 46 (new): A method for use by a first gateway to establish data communication between a first modem and a second modem over a packet network, said method comprising:

receiving a call from said first modem over a first telephone line;

negotiating, in response to said call, over said first telephone line with said first modem to establish a first physical link connection;

negotiating with said first modem to establish a first data link protocol over said first physical link connection;

informing a second gateway of said call over said packet network;

establishing a gateway-to-gateway reliable transport link with said second gateway over said packet network;

wherein said second gateway informs said second modem of said call over a second telephone line, and wherein said second gateway negotiates with said second modem over said second telephone line to establish a second physical link connection and further negotiates with said second modem to establish a second data link protocol over said second physical link connection; and

wherein data is communicated between said first modem and said second modem over three independent reliable connections including said first data link protocol, said gateway-to-gateway reliable transport link and said second data link protocol.

Claim 47(new): The method of claim 46, wherein said gateway-to-gateway reliable transport link uses a different error correction protocol than said first data link protocol and said second data link protocol.

Claim 48 (new): The method of claim 46, wherein said first data link protocol uses a different error correction protocol than said second data link protocol.

Claim 49 (new): The method of claim 46, wherein said first data link protocol includes data compression.

Claim 50 (new): A first gateway device capable of establishing data communication between a first modem and a second modem over a packet network, said first gateway device comprising:

a receiver configured to receive a call from said first modem over a first telephone line;
a controller configured to negotiating, in response to said call, over said first telephone line with said first modem to establish a first physical link connection, wherein said controller is further configured to negotiate with said first modem to establish a first data link protocol over said first physical link connection, to inform a second gateway of said call over said packet network, and to establish a gateway-to-gateway reliable transport link with said second gateway over said packet network;

wherein said second gateway informs said second modem of said call over a second telephone line, and wherein said second gateway negotiates with said second modem over said second telephone line to establish a second physical link connection and further negotiates with said second modem to establish a second data link protocol over said second physical link connection; and

wherein data is communicated between said first modem and said second modem over three independent reliable connections including said first data link protocol, said gateway-to-gateway reliable transport link and said second data link protocol.

Claim 51(new): The first gateway device of claim 50, wherein said gateway-to-gateway reliable transport link uses a different error correction protocol than said first data link protocol and said second data link protocol.

Claim 52 (new): The first gateway device of claim 50, wherein said first data link protocol uses a different error correction protocol than said second data link protocol.

Claim 53 (new): The first gateway device of claim 50, wherein said first data link protocol includes data compression.